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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,178	07/08/2003	Douglas A. Soller	J-3862	1887
28165	7590	10/19/2005	EXAMINER	
S.C. JOHNSON & SON, INC. 1525 HOWE STREET RACINE, WI 53403-2236			COLE, LAURA C	
			ART UNIT	PAPER NUMBER
			1744	
DATE MAILED: 10/19/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/615,178

Applicant(s)

SOLLER ET AL.

Examiner

Laura C. Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-21, 24-36 and 44-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13, 14, 17, 18 and 24-36 is/are allowed.
- 6) ☒ Claim(s) 2-12, 15, 16, 19-21 and 44-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02282005.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2, an independent claim, requires a brush head to be made of "a plurality of layers of a water-degradable material positioned on top of each other to form a stack of such layers, wherein at least two of the layers are formed from a sheet of the water degradable material that has been folded back upon itself along a fold line...wherein the fold line is located at the opposed end of the stack". Claim 11, which depends directly from Claim 2, requires that "the brush head is formed from a *single piece* of water-degradable material that has been repetitively *folded back on itself*..." Therefore, Claim 11 is confusing in that it requires structural elements "a single piece of material" that has been "folded back on itself" and therefore (A) requiring structure that functionally contradicts the structure of Claim 2 and (B) requiring two fold lines—one that would be located at the brush head.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 2, 6-9, 11-12, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoyt et al., USPN 1,993,215.

Hoyt et al. disclose the claimed invention including a brush head held by a cleaning device (50), wherein the brush head comprises a plurality of layers (71) of a water-degradable material (Page 3 Column 2 Lines 20-31, wherein paper is “water-degradable) positioned on top of each other to form a stack of such layers (74), wherein at least two of the layers are formed from a sheet of the water-degradable material that has been folded back upon itself along a fold line (“71” folds back upon itself, the “fold line” is the bottom most portion of “74”), wherein the head is configured such that a first end of the stack is held together by the brush head (via 72) and an opposed end of the stack can spread out between at least some of the layers of the stack (as shown in Figure 15) and wherein the fold line is located at the opposed end of the stack (see Figure 15). The layers are held together by pressure bonding (at portion “72” the layers clearly are bound by an exerted pressure.) The brush head has at least been partially impregnated with a chemical composition that is a surfactant (the strips “71” are “oiled” with a furniture polish, Page 2 Column 2 Lines 30-37) that includes 0% water (as water is not mentioned, simply furniture polish; Page 2 Column 2 Lines 30-37). The brush head comprises between four and forty layers of water degradable material in the stack (see Figure 15).

3. Claims 2-4, 6, 11-12, 15, 21, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Farrell, USPN 2,666,223.

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Farrell discloses the claimed invention including a brush head (12) suitable to be held by a cleaning device (10), wherein the brush head comprises a plurality of layers of a water-degradable material (14; and can be “flushed” and disintegrates in water, Column 3 Lines 7-24, Column 4 Lines 40-44) and the layers are positioned on top of each other to form a stack (see Figure 2). The material is folded back upon itself along fold lines (see Figure 2, Column 2 Lines 19-32; the fold lines are best shown in Figure 2 where layers fold back over themselves) and wherein the first end of the stack is held together (upper portion at “18”) and an opposed end of the stack can spread out between layers (see opposite end of “18” in Figure 1) wherein the fold lines are located at the opposed end of the stack (see Figure 2; Column 2 Lines 19-32). There is a water-dissolvable attachment means (106, Column 2 Lines 42-47). The attachment means is an adhesive (Column 2 Lines 42-47). The layers are held together and are bonded to each other by pressure exerted by “26”). The head comprises at least four layers in a stack (shown in Figure 2). The brush head comprises at least two plies of the water degradable material (see Figure 2; “plies” is defined as “a layer, as of doubled-over cloth” by *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.*) There is a separate water-dissolvable cover positioned over a portion of the brush head to which the adhesive has been applied (the cover is 26 that covers the upper portion). The layers of water-degradable material form bristles comprising a double-layer structure in the form of a loop having a closed end opposite the first end of the stack (see Figure 1).

***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 3, 5, 10, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoyt et al., USPN 1,993,215 as applied to Claim 2 in view of Jones et al., USPN 2,514,496.

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Hoyt et al. disclose all elements above, however do not disclose a “water-dissolvable” attachment means that are staples. Hoyt et al. also displays that the plurality of layers have bristle segments adjacent the opposed end of the stack (see Figure 15) and attachment means comprises no more than one-third the head axial length (see Figure 15).

Jones et al. disclose the claimed invention including a renewable brush that comprises a dissolvable attachment means of staples (16; Column 4 Line 3) as a means of securing folded layers and providing a frictional enlargement of compressed layers for retention and holding within the cleaning device (Column 3 Line 73 to Column 4 Line 21).

It would have been obvious for one of ordinary skill in the art to substitute the attaching means of Hoyt et al. for staples, as Jones et al. teach, in order to retain a stack of layers of cleaning material to a cleaning device and to fuse the layers to each other.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell, USPN 2,666,223, as applied to Claim 2, in view of Young, US 2001/0052162.

Farrell discloses all elements above, however does not include a water-degradable material that is a nonwoven fibrous web of cellulosic material that is hydroentangled.

Young discloses a disposable mop head that comprises mop loops made from a nonwoven fibrous web of cellulosic material that is hydroentangled (paragraph 25) in order to be cost-effective (Abstract.)

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It would have been obvious for one of ordinary skill in the art to substitute the type material for one that is of a nonwoven fibrous web of cellulosic material that is hydroentangled, as Young teaches, in order to produce mops of lower cost to the manufacturer and the consumer of a disposable mop structure.

6. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell, USPN 2,666,223, as applied to Claim 2, in view of Trenz et al., USPN 6,745,427 in further view of Strader, USPN 2,813,286.

Farrell discloses all elements above, however does not include a storage device of a sealed pouch that does not contain more than one brush head.

Trenz et al. disclose a water-dissolvable sealed pouch for storing a disposable brush head (3; Column 2 Lines 43-48) that does not contain more than one brush head (Column 3 Lines 13-15). The pouch of Trenz et al. appears to have a circumference (see Figure 1), however does not disclose a circumferential pouch tear line.

Strader discloses storage pouches for storing disposable cleaning brush heads (Figure 5, 17; Column 3 Lines 4-39), including a circumferential pouch tear line (25; Column 3 Lines 19-22).

It would have been obvious for one of ordinary skill in the art to dispense and store disposable or renewable brush heads, such as those disclosed by Farrell, in individual packing, as Trenz et al. teach, in order to conveniently use one brush head while unused heads remain protected, and it would have been obvious for one of ordinary skill in the art to further modify the pouch of Trenz et al. to include a



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circumferential tear line, as Strader teaches, so that a disposable brush head may be released from its packaging.

7. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell, USPN 2,666,223 as applied to Claim 2, in view of Hagelberg, USPN 4,031,673.

Farrell discloses all elements above, however do not include at least one layer of water-degradable material that is abrasive.

Hagelberg discloses a toilet bowl cleaning device that has at least one layer of the water-degradable material is abrasive (26; Column 2 Lines 24-29, Column 4 Lines 13-21).

It would have been obvious for one of ordinary skill in the art to modify at least one layer of Farrell to include abrasive properties, as Hagelberg teaches, in order to more thoroughly clean and scrape surfaces of a toilet bowl.

8. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell, USPN 2,666,223 and Hagelberg, USPN 4,031,673, as applied to Claim 45, in further view of Sorrell, USPN 6,368,003.

Farrell and Hagelberg disclose all elements above, however do not include at least one abrasive layer of water-degradable material that is apertured.

Sorrell provides a cleaning device that uses an apertured material to provide abrasiveness for cleaning (Column 2 Lines 35-39, wherein "mesh" is the apertured material, see Figures).

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It would have been obvious for one of ordinary skill in the art to modify the abrasive material of Farrell and Hagelberg to be apertured, as Sorrell teaches, so that the surface area of the apertures provide an abrasive surface for cleaning.

***Allowable Subject Matter***

9. Claims 13-14, 17-18, 24-36 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art made of record includes a handle having an internal cavity, a lower opening, a radial opening, an actuator having a projection, a connecting rod linked to the projection, a jaw linked to the rod, two positions that clamp a brush head, and further a handle having teeth that extend radially into the cavity and a connecting rod that has radially outwardly extending teeth.

Furthermore, none of the prior art of record includes a first end of a brush head comprising of a plurality of layers of a water-degradable material positioned on top of each other to form a stack of layers, wherein at least two of the layers are formed from a sheet of the water-degradable material that has been folded back upon itself, and wherein the head is configured such that a first end of the stack is held together and an opposed end of the stack can spread out between at least two of the layers, and having an axially extending notch or wherein top and bottom layers of the stack are not impregnated with a surfactant while a plurality of layers between the top and bottom layers are impregnated with a surfactant.

Furthermore, none of the prior art of record includes a wand for holding a brush head, the wand including a handle with an internal cavity, a lower opening, a radial

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opening, an actuator having a projection extending through the radial opening, a connecting rod linked to the projection which is mounted in the handle cavity, and two jaws linked to the rod which extend out the handle lower opening, and wherein the wand has been attached to a separately formed extension, the extension having a hangar hole or wherein the jaw has an axially extending tongue projection suitable to interfit with a brush head having an axial notch.

It is further noted that US 2001/0052162 is similar to the Applicant's claimed device, however the brush head does not comprise a "stack" of layers of a water-degradable material positioned on top of each other.

### ***Applicants Arguments***

11. In the response filed 19 July 2005, the Applicant contends that:

Jones, Beagle, Strader, Trenz, Farrell, and Reaume do not show positioning of the fold line or loops opposite the attachment end of the brush head as recited in claims 2 and 44.

### ***Response to Arguments***

12. Applicant's arguments filed 19 July 2005 have been fully considered but they are not persuasive.

Examiner finds persuasive the Applicant's arguments that Jones, Beagle, Strader, Trenz, and Reaume do not show positioning of the fold line or loops opposite the attachment end of the brush head as recited in claims 2 and 44. However, Farrell does in fact show positioning of the fold line or loops opposite the attachment end of the brush head as recited in claims 2 and 44 (see above). In the embodiment of Figures 1-

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2 of Farrell, there is a fold line where the corners of a stack of layered material (14) are folded into a brush head having loops or openings (22).

***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Cole whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on (571) 272-1142. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LCC  
14 October 2005

  
**JOHN KIM**  
**SUPERVISORY PATENT EXAMINER**